

**REMARKS/ARGUMENTS**

Reconsideration and continued examination of the above-identified application are respectfully requested.

No amendments have been made to the claims.

**Summary of Interview**

The undersigned appreciates the telephone interview held on January 19, 2010 with Examiners Purdy and Blanchard.

In the telephone interview, it was explained to the Examiners that claim 4, referred to by the Examiner in the Office Action, does not recite the entire structure referred to in claim 1, but only refers to the acyclic terpene radical without the terpene radical(s) attached to each oxygen. As pointed out to the Examiners, the structures in claim 4 clearly have open bonds at each oxygen site and, therefore, could not possibly be the full terpene of claim 1. As stated in the interview, claim 1 recites an acyclic terpene (C<sub>10</sub>) that has either one terpene radical attached to the acyclic terpene (which is known as a semi-acetal radical) or two terpene radicals, one at each of the oxygen sites of the acyclic terpene.

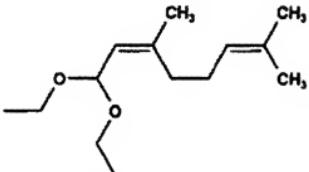
**Rejection of claims 1, 3, and 4 under 35 U.S.C. §102(b) – Behan et al.**

At pages 3 of the final Office Action, the Examiner continues to reject claims 1, 3, and 4 under 35 U.S.C. §102(b) as being anticipated by Behan et al. (WO 00/19822). The Examiner asserts that the citral diethyl acetal anticipates the claims of the present application. This rejection is respectfully traversed.

In the final Office Action, the Examiner asserted that the citral diethyl acetal of Behan et al.

falls within the scope of claim 1. The applicants respectfully disagree and the Examiner's technical understanding is chemically incorrect.

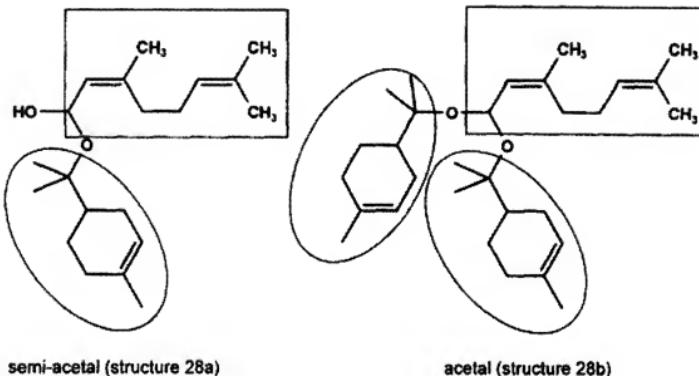
The citral diethyl acetal of Behan et al. has the following structure:



**citral diethyl acetal**

As can be seen from this structure, the terpene has an ethyl group off of each oxygen of the terpene and these ethyl groups are clearly not terpene radicals.

As recited in claim 1 of the present application, the insect repellent comprises at least one acetal or semi-acetal of an acyclic terpene, wherein the acetal or semi-acetal radicals represent a terpene radical to an object (i.e., the acyclic terpene). The applicants first wish to point out that the definition of "acetal" and "semi-acetal" are clearly understood by one skilled in the art and describe terpene radicals that are attached to the oxygen(s) of the acyclic terpene radical. Attached to this response are IUPAC definitions of "acetals" and "hemiacetals." As can be seen by the general formulas provided in these definitions, the moiety R' is attached to the oxygen atoms. Furthermore, as can be seen, the term "hemiacetal" is a synonym for "semi-acetal" (see Blue Rider attachment, under Synonyms). As further shown in the structures of the present application and dependent claims, an example of a semi-acetal radical and an example of an acetal radical, each attached to an acyclic terpene are shown below:



semi-acetal (structure 28a)

acetal (structure 28b)



Thus, it is clear that Behan et al. does not teach the structure or any related structure recited in claim 1 of the present application.

Regarding the Examiner's comments in the interview and in the Interview Summary that claim 1 is not clear, the applicants respectfully point out that, first, no §112 rejection has ever been made by the Examiner regarding claim 1 or any claim. Second, one skilled in the art clearly would understand the metes and bounds of claim 1, since claim 1 clearly recites an acetal or semi-acetal of an acyclic terpene, which terms are understood by one skilled in the art as explained above. Further, claim 1 recites that the acetal or semi-acetal is a radical that is a terpene radical. Again, this would

have clear meaning in the art and specific examples and structures are provided in the present specification and the dependent claims.

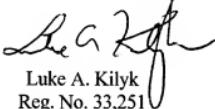
Accordingly, it is clear that Behan et al. does not teach the claimed invention and the rejection should be withdrawn.

### **CONCLUSION**

In view of the foregoing remarks, the applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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Attachments: Definition of "acetals" from  
IUPAC COMPENDIUM OF CHEMICAL TERMINOLOGY (2<sup>nd</sup> Edition, 1997) (1 pg.)  
Definition of "hemiacetals" from  
IUPAC COMPENDIUM OF CHEMICAL TERMINOLOGY (2<sup>nd</sup> Edition, 1997) (1 pg.)  
"Hemiacetal" from BlueRider.com (1 pg.)

**acetals**

Compounds having the structure  $R_2C(OR')_2$  ( $R' \neq H$ ) and thus diethers of geminal *diols*. Originally, the term was confined to derivatives of *aldehydes* (one  $R = H$ ), but it now applies equally to derivatives of *ketones* (neither  $R = H$ ). Mixed acetals have different  $R'$  groups.

See also *acetonides*, *ketals*, *acylals*, *hemiacetals*.

1995, 67, 1310

**hemiacetals**

Compounds having the general formula  $R_2C(OH)OR'$  ( $R' \neq H$ ).

See also *lactols*, *hemiketals*.

1995, 67, 1339

# BlueRider

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hemiacetal [hī'ē-ə-təl]

1) an organic compound usually formed as an intermediate product in the preparation of acetals from aldehydes or ketones

Synonyms : [hemiacetal](#) [半缩醛](#) [Δ-7-ヒドロ-β-ヒドロキルヘキサカル](#) [hemiacetal](#) [hemiacetal](#)

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